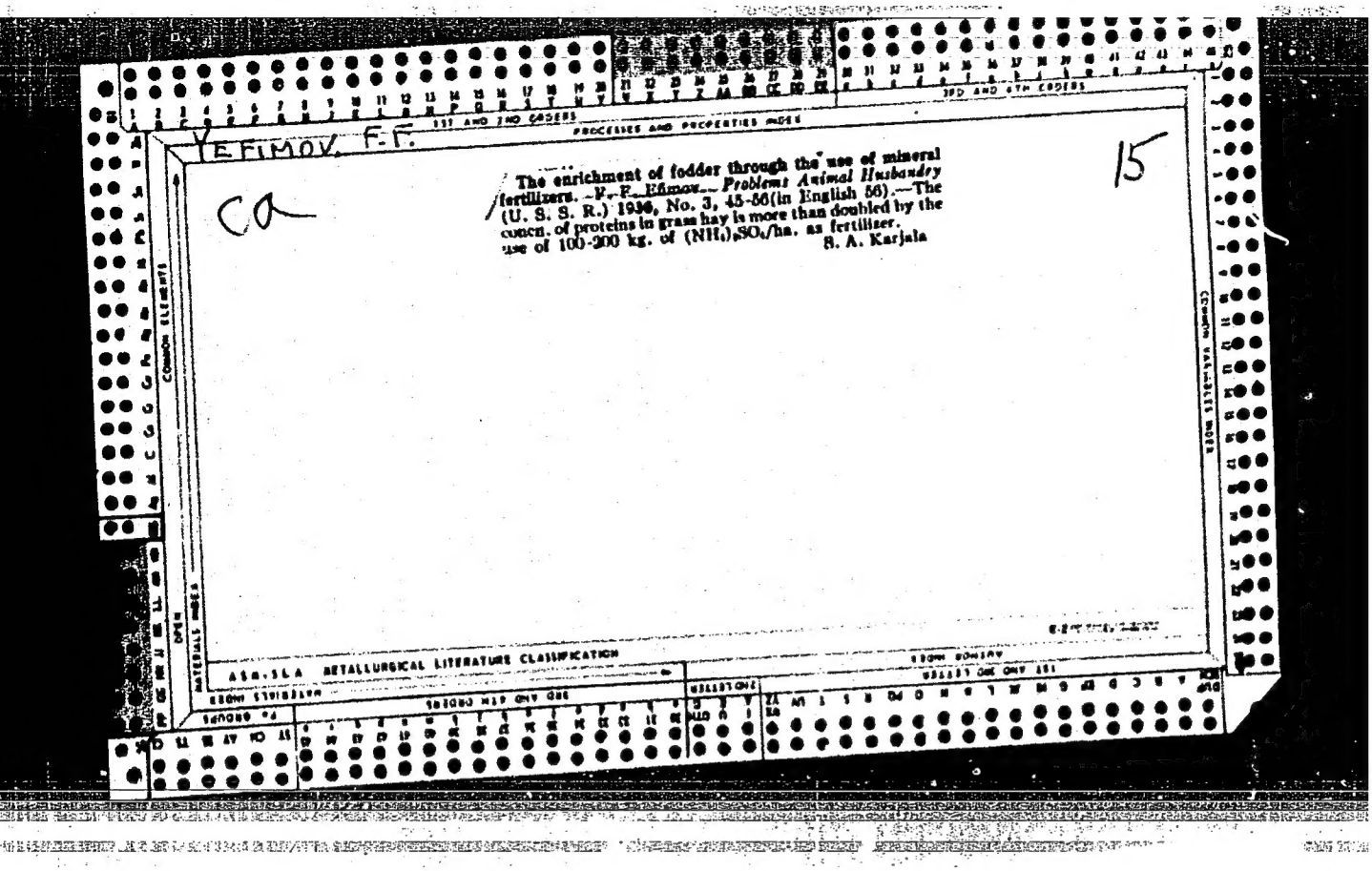
LEVIN, R.S., prof.; YEFIMOV, F.F.

Congenital familial craniofacial dysostosis. Vest.rent.i rad. 34 no.2:80-82 Mr-Ap '59. (MIRA 13:4)

1. Iz rentgenovskogo otdeleniya Nauchno-issledovatel'skogo pediatricheskogo instituta (direktor - prof. A.L. Libov) Ministerstva zdravookhraneniya RSFSR.
(HYPERTELORISM, case reports,
x-ray (Rus))



YEFIMOV, F.F.

CA

15

The enrichment of fodder through the use of mineral fertilizers. —F. F. Efimov.— *Problems Animal Husbandry* (U. S. S. R.) 1936, No. 3, 45-56(in English 56).—The concn. of proteins in grass hay is more than doubled by the use of 100-200 kg. of $(NH_4)_2SO_4$/ha. as fertilizer.
S. A. Karjala

Q

Country : USSR
Catogory : Farm Animals.
General Problems.

Abs. Jour : Ref Zhur-Biol., No 21, 1958, 96817

Author : Yefimov, F. F.; Obraztsova, A. S.
Institut. : All-Union Scientific Research Institute of*
Title : The Utilization of Urea as Fertilizer and as a Partial Protein Substitute in Animal Rations.

Orig Pub. : Byul. nauchno-tekhn. inform. Vses. n.-i. in-t zhivotnovodstva, 1957, No 2 (4), 40-43

Abstract : One tract of land was fertilized in field tests by urea, another by salpeter. The corn crop of the first tract amounted to 100 percent, of the second to 63 percent. An experiment was performed with 8-9 months old calves. The first group received corn silage derived from the field fertilized with urea, the second - from the field fertilized with salpeter, the third - from the control field, the fourth - from the control field with additional 90 g of urea

Card: 1/2 *Animal Husbandry.

13

Country : USSR
Category : Farm Animals.
General Problems. Q
Abs. Jour : Ref Zhur-Biol., No 21, 1958, 96817

Author :
Institut. :
Title :

Orig Pub. :

Abstract : containing 41 g of nitrogen. In the first two groups of calves a negative nitrogen balance was observed, in the third, a small positive balance, in the fourth, a considerable positive nitrogen balance were observed.

Card: 2/2

YEFIMOV, F.F., kandidat sel'skokhozyaystvennykh nauk; OBRAZTSOVA, A.S.

Urea, effective nitrogen fertilizer. Nauka i pered. op. v sel'khoz. 7 no.4:31-32 Ap '57. (MLRA 10:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zhivotnovodstva (for Obraztsova).

(Urea)

YEFIMOV F. F.

D'YAKOV, Mikhail Iudovich, akademik [deceased]; BELEN'KIY, N.G., obshchiy red.; DMITROCHENKO, A.P., prof., doktor sel'skokhoz. nauk, obshchiy red.; KONDYREV, V.Ye., kand.sel'skokhoz.nauk, obshchiy red.. V redaktirovanii prinimali uchastiye: GOLUBENTSOVA, Yu.V., kand.sel'skokhoz.nauk, nauchnyy sotrudnik, red. [deceased]; MYSYUTKINA, M.V., kand.sel'skokhoz.nauk, nauchnyy sotrudnik, red.; YEFIMOV, F.F., kand.sel'skokhoz.nauk, nauchnyy sotrudnik, red.; KABOZEV, S.M., kand.sel'skhokhoz.nauk, nauchnyy sotrudnik, red.; BEDNARSKAYA, G.A., red.; BALLOD, A.I., tekhn.red.

[Selected works in two volumes] Izbrannye sochineniia v dvukh tomakh. Moskva, Gos.izd-vo sel'khoz.lit-ry. Vol.1. 1959. 515 p. Vol.2., 1959. 647 p. (MIRA 13:1)

1. Vsesoyuznaya akdemiya sel'skokhoz.nauk im. V.I.Lenina (for D'yakov). 2. Deystvitel'nyy chlen Vsesoyuznoy akademii sel'skokhozyaystvennykh nauk imeni V.I.Lenina (for Belen'kiy). 3. Vsesoyuznyy nauchno-issledovatel'skiy institut kormleniya sel'skokhozyaystvennykh zhivotnykh (for Golubentseva, Mysyutkina, Yefimov, Kabozev).

(Agriculture)

YEFIMOV, F.N.

Studying physical characteristics of rocks. Geol. nefti 1 no.2: 60-63 F '57. (MLRA 10:8)

(Rocks)

Yefimov, F.N.

YEFIMOV, F.N.

Magnetic-fractional-mineralogical analysis. Geol. nefti 2 no.1:63-69 Ja '58. (MIRA 11:1)

(Rocks--Magnetic properties)

YEFIMOV, F.N.

Magnetic-fractional-mineralogical study of rocks. Izv. AN SSSR. Ser.geol. 26 no.9:24-36 S '61. (MIRA 14:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologorazvedochnyy neftyanoy institut (VNIGNI) Ministerstva geologii i okhrany nedr SSSR, Moskva.

(Rocks--Magnetic properties)

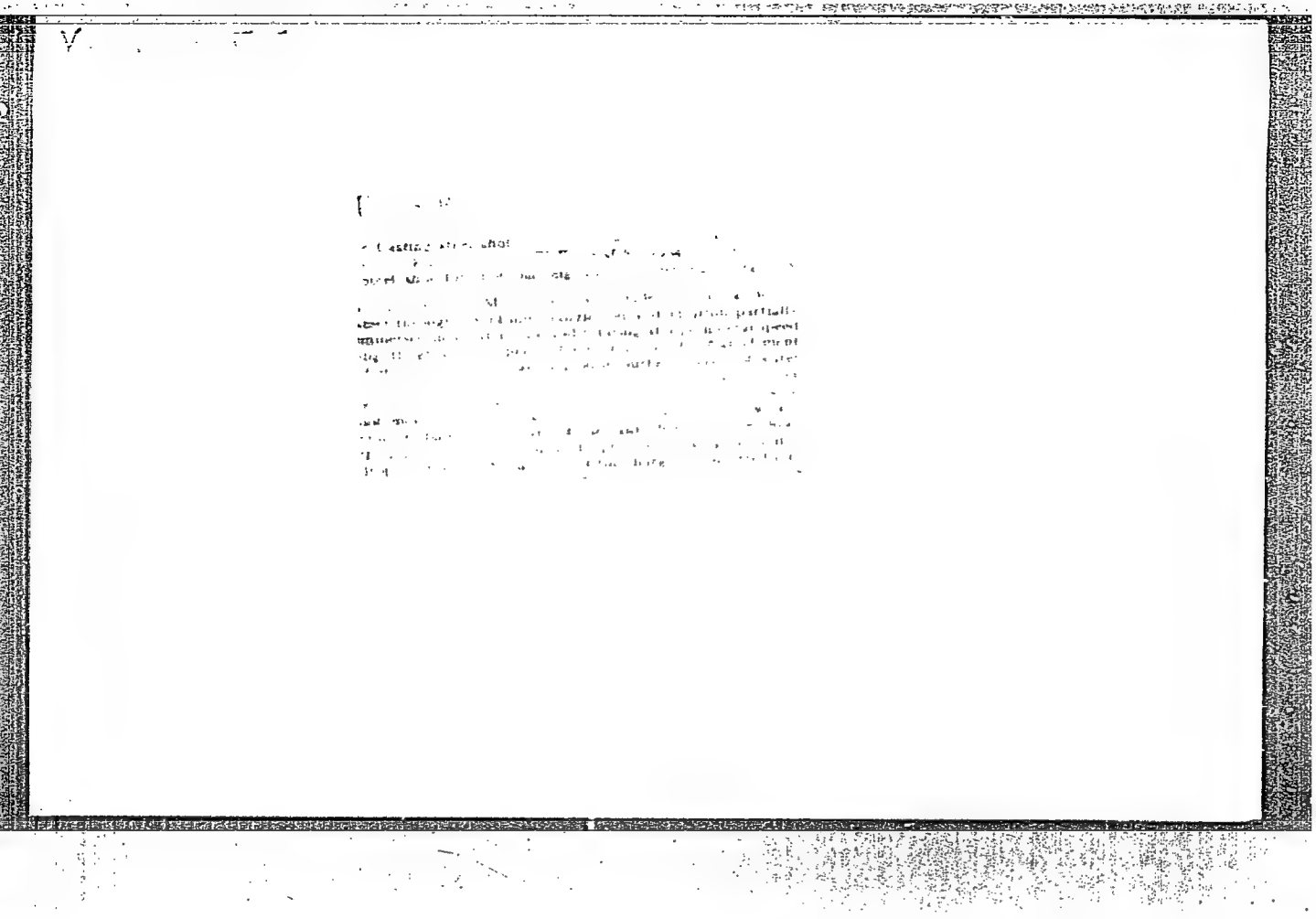
YEFIMOV, F.N.

New method for analyzing rocks and iron ores. Sov.geol. 6 no.2:152-155 F '63. (MIRA 16:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologorazvedochnyy neftyanoy institut.
(Rocks—Analysis) (Iron ores—Analysis)

YEFIMOV, Fedor Nikolayevich; POSPELOVA, A.M., ved. red.

[Magnetic-fractional-mineralogical (MFMA) analysis of rocks] Magnitno-fraktsionno-mineralogicheskii analiz (MFMA) gornykh porod. Moskva, Nedra, 1964. 223 p. (MIRA 17:11)



YEFIMOV, F.T.; FROLOV, N.G.; MAKOVSKIY, G.M., inzh., red.; GORDEYEVA, L.P., tekhn. red.

[Metal shot and sand; production and use] Metallicheskie drob' i pesok; proizvodstvo i primenenie. Moskva, Mashgiz, 1963. 142 p. (MIRA 16:7)

(Shot) (Sand, Foundry)

YEFIMOV, G.; CHERKASOV, N.

Exemplary work of motion-picture operator Rumiantsev. Kinomekhanik no. 1:5-6 Ja '55. (MLRA 8:2)
(Rumiantsev, N.)

YEFIMOV, G.

N/5
604
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Russia. Posol'stvo. India.

Sputniks breaking into cosmos. Ed. by G. Efimov. New Delhi, USSR Embassy, 1957.

78 p. illus. (Booklets on the Soviet Union)

GALEYEV, A.; YEFIMOV, G., rabkor; SERDYUKOV, N., inzh.; LOBZA, L. UL'KIN, P., uchitel' (Novozybkovskiy rayon Bryanskoy obl.); PETROV, V., uchitel' (Novozybkovskiy rayon Bryanskoy obl.) DEGTYAREV, M.

Letters to the editors. Sov. profsoiuzy 17 no. 2:46-49 Ja '61. (MIRA 14:2)

1. Predsedatel' promyslovogo komiteta profsoyuza, g. Oktyabr'skiy (for Galeyev). 2. Gomel'skaya remontno-ekspluatasionnaya baza rechnogo flota (for Serdyukov). 3. Chlen rabsel'korovskogo soveta gazety "Vpered" Razdel'nyanskogo rayona Odesskoy oblasti (for Degtyarev).
(Trade unions)

YEFIMOV, G., kand.tekhn.nauk; KUTSENKO, V., inzhener-polkovnik

Method for calculating the number of cars. Tyl i snab. Sov. Voor. Sil 21 no.4:81-83 Ap '61. (MIRA 14:7)
(Automobiles, Military--Transportation)
(Military railroads)

YEFIMOV, G. (Astrakhan')

Improve the streetcar lines. Zhil.-kom. khoz. 13 no.4:25 Ap '63. (MIRA 16:5)

(Astrakhan—Streetcars)

LOBOV, V., kand. biolog. nauk; YEFIMOV, G.[IEfimov, H.], nauchnyy sotrudnik

Chemical protection of plants. Nauka i zhyttia 12 no.2:8-10 F '63. (MIRA 16:4)

1. Institut organicheskoy khimii AN UkrSSR (for Yefimov).

(Agricultural chemicals)
(Plants, Protection of)

YEFIMOV, G.A.

USSR/General and Specialized Zoology - Insects. P.

Abs Jour : Ref Zhur - Biol., No 8, 1958, 35321

Author : Zagaykevich, I.K., Yefimov, G.A.
Inst : -
Title : Elateroides Dermestoides as a Beech Pest in the Carpathian Mountains.

Orig Pub : Lesn. k-vo, 1956, No 11, 44-46.

Abstract : Elateroides dermestoides is a mass technical pest of the beech, birch and fir trees. It inhabits the alder, oak, elm, ash, chestnut, maple, asp, poplar, pine, fir and larch trees. The emergence of the beetles in various forestries in different years lasted from April 17 to June 29. The females picked out for egg-laying thick trees lying on the ground or weakened-in the loxer parts-standing trees, stumps and root lugs. Curved larvae passages penetrated horizontally into the wood or around the trunk. The larvae cleared the bore meal from the

Card 1/2

USSR/General and Specialized Zoology - Insects.

Abs Jour : Ref Zhur - Biol., No 8, 1958, 35321

passages. The walls of the passages were covered with mycelium Endomyces hylecoeti (the spores were carried by the female) which served as the chief food for the larvae. The decay (and rapid destruction) of the wood frequently starts from the passages; it is caused usually by pore fungi. Sanitary care of the forest is needed, and in the centers of mass propagation of the pests it is necessary to treat the stumps, trunks and wood residues with a DDT solution in diesel fuel prior to egg-laying.

Card 2/2

ZAGAYKEVICH, I.K. [Zahaikevych, I.K.]; YEFIMOV, G.A. [IEfimov, H.O.]

Dilus fugax Oliv. as a pest of papilionaceous shrubs. Zbir. prats' muz. AN URSR no.28:103-104 '57. (MIRA 11:5)
(Kiev Province--Longicorn beetles)
(Leguminosae--Diseases and pests)
(Kiev Province--Borers (Insects))

LOBOV, V.P.; YEFIMOV, G.A. [IEfimov, H.O.]; GORDAYA, M.V. [Horda, M.V.]

Herbicidal properties of diphenylethane derivatives. Dop. AN URSR no.5:682-686 '64. (MIRA 17:6)

1. Institut organicheskoy khimii AN UkrSSR. Predstavleno akademikom AN UkrSSSR D.K.Zerovym.

YEFIMOV, G.A. [IEfimov, H.O.]

Avenin, a new systemic insecticide. Dop.AN URSR no.8:1095-1097 '60. (MIRA 13:9)

1. Institut organicheskoy khimii AN USSR. Predstavleno AN USSR P.A. Vlasyukom.

(Insecticides)

YEFIMOV, G.A. [IEfimov, H.O.]; KAGAN, Yu.S. [Kahan, IU.S.]

Toxicity of diesters of urethanphosphoric acids to insects and warm-blooded animals. Dop. AN URSR no.2:275-278 '64. (MIRA 17:5)

1. Institut organicheskoy khimii AN UkrSSR. Predstavleno akademikom AN UkrSSR A.P. Markevichem [Markevych, O.P.].

YEFIMOV, G.A. [IEfimov, H.O.]; LOBOV, V.P.

Insecticidal properties of the parachlorothiophenyl ester of phenylfluorothiophosphinic acid. Dop. AN URSR no.7:969-971 '64. (MIRA 17:9)

1. Institut organicheskoy khimii AN UkrSSR. Predstavleno akademikom AN UkrSSR A.P.Markevichem [Markevych, O.P.].

YEFIMOV, G.A.

Pathomorphology of afferent and efferent structures of the intramural nervous system of the lungs in fibrocavernous tuberculosis. Probl. tub. 41 no.8:66-72 '63. (MIRA 17:9)

1. Iz kliniki obshchey khirurgii (zav. - zasluzhennyy deyatel'nauki RSFSR prof. A.A.Polyantsev) Volgogradskogo meditsinskogo instituta i khirurgicheskogo otdeleniya oblastnoy klinicheskoy bol'nitsy (glavnyy vrach - zasluzhennyy vrach RSFSR A.I.Gusev).

L 9491-66 EWT(1)/EWP(m)/FS(v)-3/EWA(d) GW

ACC NR: AP6000301 SOURCE CODE: UR/0293/65/003/006/0811/0825

17
B

AUTHOR: Yefimov, G. B.; Okhotsimskiy, D. Ye.
44 44

ORG: none

TITLE: On optimum acceleration of a spacecraft in a central field

SOURCE: Kosmicheskiye issledovaniya, v. 3, no. 6, 1965, 811-825

TOPIC TAGS: energy optimum trajectory, optimum acceleration, low thrust spacecraft, hyperbolic velocity
12,44

ABSTRACT: This article can be considered as an extension of the article by D. Ye. Okhotsimskiy (Investigation of motion in a central force field with constant tangential acceleration. Kosmicheskiye issledovaniya, v. 2, no. 6, 1964, 817-824). The simple asymptotic formulas derived there make it possible to calculate the parameters of motion in the neighborhood of a gravitational center as well as at points distant from it. Here, the authors raise the question of the extent to which this scheme is optimal. They analyze the variational problem of the energy-optimum acceleration of a low-thrust spacecraft in a central gravitational field from a nearly circular orbital velocity to hyperbolic velocity under the assumptions that this acceleration is variable and that its direction deviates from the direction of the tangent to the trajectory. The properties of such motion in the neighborhood of the gravitational center and at points distant from the center are analyzed. The energy-

UDC: 629.191

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Card 1/2

L 9491-66

ACC NR: AP6000301 O

optimum motion is compared with the corresponding motion of a spacecraft with constant tangential acceleration and its advantages and disadvantages are indicated. The authors emphasize that the scheme of motion with constant tangential acceleration presented in the earlier article is sufficiently simple and rational. The construction of the limit solution of the variational problem by which estimating the basic flight parameters can be reduced to the use of single-entry tables or to calculations by means of simple formulas (as is done in the case of motion with constant tangential acceleration) is considered. Orig. art. has: 3 figures, 53 formulas, and 2 tables. [LK]

SUB CODE: 22/ SUBM DATE: 17Aug65/ ORIG REF: 003/ OTH REF: 001/ ATD PRESS: 4164

Card 2/2

BRYLEYEV, A.M., doktor tekhn.nauk; MOZHAYEV, S.S., inzh.; YEFIMOV, G.K., inzh.

Modernized numerical a.c. code-type automatic block system. Avtom., telem. i sviaz' 5 no.11:10-13 N '61. (MIRA 14:11)
(Railroads--Signaling--Block system)

BRYLEYEV, A.M., doktor tekhn.nauk, prof.; PUGIN, D.K., kand.tekhn.nauk; YEFIMOV, G.K., inzh.

Coded a.c. circuit blocking with time division of coding in the adjacent track cuicuits. Vest.TSNII MPS 20 no.5:3-8 '61. (MIRA 14:8)

(Railroads--Signaling--Block system)

BRYLEYEV, A.M., doktor tekhn.nauk, prof.; SHISHLYAKOV, A.V., kand.tekhn. nauk; PUGIN, D.K., kand.tekhn.nauk; YEFIMOV, G.K., inzh.; MOZHAYEV, S.S., inzh.; GRIGOR'YEV, N.I., inzh., retsenzent; KAZAKOV, A.A., kand.tekhn.nauk, retsenzent; PETUSHKOVA, I.K., inzh., red.; USENKO, L.A., tekhn.red.

[New systems of coded automatic block signaling] Novye sistemy kodovoi avtoblokirovki. Moskva, Vses. izdatel'sko-poligr. ob"edinenie M-va putei soob., 1961. 135 p. (Moscow. Vsesoiuznyi nauchno-issledovatel'skii institut zheleznodorozhnogo transporta. Trudy, no.219) (MIRA 15:1)

(Railroads--Signaling--Block system)

YEFIMOV, G.K., mladshiy nauchnyy sotrudnik; DMITRIYEV, V.S.

A selective device for measuring the harmonic components of traction network current. Avtom., telem. i svyaz' 7 no.1:7-9 Ja '63. (MIRA 16:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zheleznodorozhnogo transporta Ministerstva putey soobshcheniya (for Yefimov). 2. Starshiy inzh. Vsesoyuznogo nauchno-issledovatel'skogo instituta zheleznodorozhnogo transporta Ministerstva putey soobshcheniya (for Demitriyev).

(Electric railroads—Current supply)
(Electric railroads—Electric measurements)

SHISHLYAKOV, A. V., kand. tekhn. nauk; YEFIMOV, G. K., kand. tekhn. nauk; DMITRIYEV, V. S.

Track circuit with tuned resonant joint transformers. Avtom., telem. i sviaz' 7 no.4:4-7 Ap '63. (MIRA 16:4)

1. Starshiy inzh. laboratorii avtoblokirovki i avtoregulirovki Vsesoyuznogo nauchno-issledovatel'skogo instituta zheleznodorozhnogo transporta Ministerstva putey soobshcheniya (for Dmitriyev).

(Railroads—Signaling—Centralized traffic control)

BRYLEYEV, A.M., doktor tekhn. nauk; YEFIMOV, G.K., kand. tekhn. nauk; MOZHAYEV, S.S., inzh.

Code-type automatic a.c. block system with a DIa stage. Avtom., telem. i sviaz' 7 no.6:3-7 Je '63. (MIRA 17:3)

ACC NR: AP6014731 (A) SOURCE CODE: UR/0006/65/000/012/0031/0034

AUTHOR: Yefimov, G.N.; Sigalov, V.M.

ORG: None

TITLE: Experience acquired in the use of electronic computers in triangulation calculations

SOURCE: Geodeziya i kartografiya, no 12, 1965, 31-34

TOPIC TAGS: geodesics, geodetic survey, triangulation, computer application, digital computer/ Ural-1 digital computer/ Ural-2 digital computer/ Minsk-1 digital computer

ABSTRACT: This paper is an account of experience gained in the use of EDP in geodetic surveying. Computer programs were written and computations performed for various phases of triangulation and related geodetic surveying work. Triangulation adjustment computations, limited to small, under 10 determinable points network, were performed; these were transferred from Ural-1 to the Minsk-1 computer which does this work 12 times faster and 4.5 times cheaper. Preliminary processing of triangulation: programs for this work were originally written for both the Ural-1 and Minsk-1 computers, but beacause of the better effectiveness of the Minsk-1, the computations are now done only on the Minsk-1. Coordinate transfer between adjacent 6 degree zones: programs for this work have been written for both the Ural-1 and the more powerful Ural-2 computer. For the solution of the reverse problems, other programs have been adapted, with minor

UDC: 528,063,9;681,142

Card 1/2

switching addenda - the triangulation adjustment program and the zone transfer program. A special program enables the computer to verify the perforated tape using optical means. Characteristics and limitations of the developed programs are given. The total computer time for the processing of a triangulation system is 6n minutes for the Ural-1, with n - the total number of points; for Minsk-1 the time is k minutes, where k is the number of (only) the points to be determined. Much checking is done by repeat computation with changed coordinates. A maximum of 27 triangulation adjustment problems can be handled; the time is 30 minuts. The preliminary processing of triangulation is done twice, independently, acting upon information supplied independently by two persons. A maximum number of 73 points and 599 directions can be handled (on the Minsk-1). The transfer of coordinates program can handle up to 320 points, with up to 2240 directions (Ural-2). Computer time is 5 seconds (1 minute on the Ural-1). Various programming and chechout pointers and observations are presented. Orig.art. has 1 table.

SUB CODE: 08, 09/ SUBM DATE: None/ ORIG REF: 000

LOBOV, V. P., kand. biolog. nauk; YEFIMOV, G. O.[IEfimov, H. O.]

Modern methods of the chemical control of weeds. Khim. prom. [Ukr.] no.1:40-43 Ja-Mr '62. (MIRA 15:10)

1. Nauchno-issledovatel'skiy institut organicheskoy khimii AN UkrSSR.

(Weed control)

LOBOV, V.P. kand. biol. nauk; YEFIMOV, G.O. [IEfimov, H.O.]

Field testing of the domestic "Avenin" preparation in the control of sugar beet weevils. Khim. prom. [Ukr.] no.4: 35-37 O-D'63. (MIRA 17:6)

S/0021/64/000/002/0275/0278

ACCESSION NR: AP4012593

AUTHOR: Yefimov, G. O.; Kagan, Yu. S.

TITLE: The toxicity of diesters of urethanphosphoric acids for insects and warm-blooded animals

SOURCE: AN UkrRSR. Dopovidi, no. 2, 1964, 275-278

TOPIC TAGS: organophosphorus compound, insecticide, organic phosphorus insecticide, anticholinesterase, toxicity

ABSTRACT: The present work dealt with organophosphorus compounds, the diesters of urethanphosphoric acids of the type $ROOCNHP(O)(OR')_2$, where R and R' are alkyls. The dimethyl esters of isopropyl', methyl- and ethylurethanphosphoric acids are very toxic for the sugar-beet weevil, the first-mentioned being the most toxic. Preparations of diesters have high selective toxicity for certain insect species of the order Diptera (Musca domestica, M. stabulans, Hylemia antiqua and Pegomia hyosciami). The preparations were tested on rats and found to be practically harmless, manifesting a very weak anticholinesterase activity in vitro and not being transformed into active anticholinesterase agents in the animal organism. Orig. art. has 2 tables.

Card 1/2

ACCESSION NR: AP4012593

ASSOCIATION: Insty*tut organichnoyi khimiyi AN UkrRSR(Institute of Organic Chemistry, AN UkrRSR)

SUBMITTED: 06May63 DATE ACQ: 03Mar64 ENCL: 00

SUB CODE: AM NO REF SOV: 009 OTHER: 000

Card 2/2

YEFIMOV, G. P.

Efimov, G. P. "Apparatus Constructed by I. N. S. for Determining the Elasticity Modulus of Rocks." Mineral'noe Syrie, Moscow, No. 1, 1937, pp. 45-53.

YEFIMOV, G. P.

BOGDANOV, N.K., kandidat tekhnicheskikh nauk; YEFIMOV, G.P., inzhener

Calculating securing devices for freight transported on railroad flatcars. Tekh.zhel.dor.6 no.12:7-10 D '47. (MLRA 8:12)
(Railroads--Cars)

YEFIMOV, G P

Peredovaya Tekhnologiya Ispol'zovaniya Pogruzchikov I Kranov (Modern Technology of the Utilization of Loaders and Cranes, by) G.P. Yefimov. Moskva, Transzheldorizdat, 1951.
107 p. Diagrs., Tables (Trudy Vsesoyuznogo Nauchno-Issledovatel'skogo Instututa Zheleznodorozhnogo Transporta, Vyp. 44)

KOGAN, L.A.; MOLYARCHUK, G.S.; YEFIMOV, G.P.; GOLOVANOV, A.L., redaktor; YUDZON, D.M., tekhnicheskiy redaktor

Advanced technology in the use of loaders and cranes. Trudy TSNII MPS no.44:3-108 '51. (MLRA 8:7)
(Loading and unloading) (Cranes, derricks, etc.)

USSR/Engineering - Automotive equipment

Card 1/1 : Pub. 71 - 13/17

Authors : Efimov, G. P., and Korotkov, V. N.

Title : The effectiveness of the use of lift-trucks in rail transport

Periodical : Mech. trud. rab. 5, 41-45, July 1954

Abstract : A study was conducted concerning the advantage of using lift-trucks for loading commercial goods on rolling stock. General description of 4IO, 4004, and UPM-6 lift-trucks is presented, together with instructions for their operation. Illustrations; table.

Institution : .....

Submitted : .....

BENESHEVICH, I.I., kandidat tekhnicheskikh nauk; BOGIN, N.M., kandidat tekhnicheskikh nauk; BYKOV, Ye.I., inzhener; VLASOV, I.I., kandidat tekhnicheskikh nauk; GRITSEVSKIY, M.Ye., inzhener; GRUBER, L.O., inzhener, GURVICH, V.G., inzhener; DAVYDOV, V.N., inzhener; YERSHOV, I.M., kandidat tekhnicheskikh nauk; ZASORIN, S.N., kandidat tekhnicheskikh nauk; IVANOV, I.I., kandidat tekhnicheskikh nauk; KRAUKLIS, A.A., inzhener; KROTOV, L.B., inzhener; LAPIN, V.B., inzhener; LASTOVSKIY, V.P., dotsent; LATUNIN, N.I., inzhener; MARKVARDT, K.G., professor, doktor tekhnicheskikh nauk; MAKHAYLOV, M.I., professor, doktor tekhnicheskikh nauk; NIKANOROV, V.A., inzhener; OSKOLKOV, K.N., inzhener; OKHOSHIN, L.I., inzhener; PARFENOV, K.A., dotsent, kandidat tekhnicheskikh nauk; PERTSOVSKIY, L.M., inzhener; POPOV, I.P., inzhener; PORSHNEV, B.G., inzhener; RATNER, M.P., inzhener; ROSSIYSKIY, G.I., dotsent, kandidat tekhnicheskikh nauk; RYKOV, I.I., kandidat tekhnicheskikh nauk; RYSHKOVSKIY, I.Ya., dotsent, kandidat tekhnicheskikh nauk; RYABKOV, A.Ya., professor [deceased]; TAGER, S.A., kandidat tekhnicheskikh nauk; KHAZEN, M.M., professor, doktor tekhnicheskikh nauk; CHERNYSHEV, M.A., doktor tekhnicheskikh nauk; SHIN, L.Ye., professor, doktor tekhnicheskikh nauk; YURGENEV, B.N., dotsent; AKSENOV, I.Ya., dotsent, kandidat tekhnicheskikh nauk; ARKHANGEL'SKIY, A.S., inzhener; BARTENEV, P.V., professor, doktor tekhnicheskikh nauk; BERNGARD, K.A., kandidat tekhnicheskikh nauk; BUROVOY, N.Ye., dotsent, kandidat tekhnicheskikh nauk; BOGDANOV, I.A., inzhener; BOGDANOV, N.K., kandidat tekhnicheskikh nauk; VINNICHENKO, N.G., dotsent, kandidat ekonomicheskikh nauk;

(Continued on next card)

BENESHEVICH, I.I.----(continued) Card 2.

VASIL'YEV, V.F.; GONCHAROV, N.G., inzhener; DERIBAS, A.T., inzhener; DOBROSEL'SKIY, K.M., dotsent, kandidat tekhnicheskikh nauk; DLUGACH, B.A., kandidat tekhnicheskikh nauk; YEFIMOV, G.P., kandidat tekhnicheskikh nauk; ZEMBLINOV, S.V., professor, doktor tekhnicheskikh nauk; ZABELLO, M.L., kandidat tekhnicheskikh nauk; IL'IN, K.P., kandidat tekhnicheskikh nauk; KARETNIKOV, A.D., kandidat tekhnicheskikh nauk; KAPLUN, F.Sh., inzhener; KANSHIN, M.D.; KOCHNEV, P.P., professor, doktor tekhnicheskikh nauk; KOGAN, L.A., kandidat tekhnicheskikh nauk; KUCHURIN, S.F., inzhener; LEVASHOV, A.D., inzhener; MAKSIMOVICH, B.M., dotsent, kandidat tekhnicheskikh nauk; MARTYNOV, M.S., inzhener; MEDRL', O.M., inzhener; NIKITIN, V.D., professor, kandidat tekhnicheskikh nauk; PADNYA, V.A., inzhener; PANTELEYEV, P.I., kandidat tekhnicheskikh nauk; PETROV, A.P., professor, doktor tekhnicheskikh nauk; POVOROZHENKO, V.V., professor, doktor tekhnicheskikh nauk; PISKAREV, I.I., dotsent, kandidat tekhnicheskikh nauk; SERGEYEV, Ye.S., kandidat tekhnicheskikh nauk; SIMONOV, K.S., kandidat tekhnicheskikh nauk; SIMANOVSKIY, M.A., inzhener; SUYAZOV, I.G., inzhener; TAIDAYEV, F.Ya., inzhener; TIKHONOV, K.K., kandidat tekhnicheskikh nauk; USHAKOV, N.Ya., inzhenr; USPENSKIY, V.K., inzhener; FEL'DMAN, E.D., kandidat tekhnicheskikh nauk; FERAPONTOV, G.V., inzhener; KHOKHLOV, L.P., inzhenr; CHERNOMORDIK, G.I., professor, doktor tekhnicheskikh nauk; SHAMAYEV, M.F., inzhener; SHAFIRKIN, B.I., inzhener; YAKUSHIN, S.I., inzhener; GRANOVSKIY, P.G., redaktor; TISHCHENKO, A.I., redaktor; ISAYEV, I.P., dotsent, kandidat tekhnicheskikh nauk, redaktor; KLIMOV, V.F., dotsent kandidat tekhnicheskikh

(Continued on next card)

BENESHEVICH, I.I.--- (continued) Card 3.
nauk, redaktor; MARKOV, H.V., inzhener, redaktor; KALININ, V.K., inzhener, redaktor; STEPANOV, V.M., professor, redaktor; SIDOROV, N.I., inzhener, redaktor; GERONIMUS, B.Ye., kandidat tekhnicheskikh nauk, redaktor; ROBEL', R.I., otvetstvennyy redaktor

[Technical reference manual for railroad engineers] Tekhnicheskii spravochnik zheleznodorozhnika. Moskva, Gos. transp.zhel-dor. izd-vo. Vol.10. [Electric power supply for railroads] Energosnabzhenie zheleznykh dorog. Otv.red. toma K.G.Markvardt. 1956. 1080 p. Vol.13. [Operation of railroads] Ekspluatatsiia zheleznykh dorog. Otv. red. toma R.I.Robel'. 1956. 739 p. (MLRA 10:2)

1. Chlen-korrespondent Akademii nauk SSSR (for Petrov)
(Electric railroads) (Railroads--Management)

YEFIMOV, G.P.

KOGAN, A., kandidat tekhnicheskikh nauk; YEFIMOV, G.P., kandidat tekhnicheskikh nauk; DOLGOV, N.M.

Testing small-sized loaders. Vest.TSNII MPS 15 no.2:61 S '56.
(MIRA 9:12)

(Work lift trucks)

Ефимов Г.П.

AUTHOR: Yefimov, G.P., Engineer. 133-7-14/28

TITLE: Production of Rail Soleplates for Reinforced Concrete Sleepers. (Proizvodstvo rel'sovykh podkladok k zhelezobetonnym shpalam)

PERIODICAL: Stal', 1957, No.7, pp. 627 - 628 (USSR)

ABSTRACT: The types of soleplates and their manufacturing methods are described and illustrated in Figs. 1 - 3. There are 3 figures.

ASSOCIATION: Kuznetsk Metallurgical Combine (Kuznetskiy Metallurgicheskiy Kombinat)

AVAILABLE: Library of Congress.

Card 1/1

Yefimov, G.P.

AUTHOR: Yefimov G.P., Engineer. 133-12-13/26

TITLE: Manufacture of Hole-piercing Punches for Rail Fishplates (Izgotovleniye puansonov dlya proshivki otverstiy v rel'sovykh nakladkakh)

PERIODICAL: Stal', 1957, No.12, p.1111 (USSR).

ABSTRACT: The design of the punch is described and illustrated. The punch is capable of making 20 000 holes without repair. There is 1 figure.

ASSOCIATION: Kuznetskiy Metallurgical Combine (Kuznetskiy metallurgicheskiy kombinat) [located in Stalinsk (Kemerovskaya o)]

AVAILABLE: Library of Congress

Card 1/1

Yefimov, G.P.

AUTHOR: Yefimov, G.P. 130-3-12/21

TITLE: Avoiding nicks in rail cover plates. (Ustraneniye zaboin v rel'sovykh nakladkakh).

PERIODICAL: Metallurg, 1958, No.3, p.26 (USSR).

ABSTRACT: Nicks were found to be produced in blanks from which rail cover plates are made when the blanks pass over plates from the furnace to the roller table. This arose when the plates became covered with scale and necessitated the frequent cleaning and replacement of the cast (Steel Л3) plates. The difficulty was overcome by using 10 mm thick and 0.8 m long plates of ЭИ417 steel which could be replaced without stopping the furnace.
There is 1 figure.

ASSOCIATION: Kuznetsk Metallurgical Combine.
(Kuznetskiy Metallurgicheskiy Kombinat).

AVAILABLE: Library of Congress.

Card 1/1

YEFIMOV, G.P.

AUTHOR: Yefimov, G.P., Engineer 133-58-3-15/29

TITLE: Manufacture of Clamps for Separate Fastening of R-50 Type Rails (Proizvodstvo klemm dlya razdel'nogo skrepleniya k rel'sam R-50)

PERIODICAL: Stal', 1958, Nr 3, pp 240 - 241 (USSR)

ABSTRACT: The method of manufacturing (stamping) clamps for fixing the rail foot to the sleeper, used on the Kuznetskiy Metallurgical Combine is described and illustrated. There are 2 figures.

ASSOCIATION: Kuznetskiy metallurgicheskiy kombinat (Kuznetskiy Metallurgical Combine)

AVAILABLE: Library of Congress

Card 1/1

GONCHAROV, Nikolay Grigor'yevich; YEFIMOV, German Pavlovich; MANYUKOV, G.S., inzh., red.; VERINA, G.P., tekhn.red.

[Transportation of oversize and heavy freight] Perevozki negabaritnykh i tiazheloveanykh gruzov. Moskva, Gos.transp. zhel.-dor.izd-vo, 1959. 223 p. (MIRA 12:6)
(Railroads--Freight)

SMEKHOV, Anatoliy Alekseyevich, kand.tekhn.nauk. Prinimal uchastiye YEGOROV, K.A., kand.tekhn.nauk. YEFIMOV, G.P., red.; MEDVEDEVA, M.A., tekhn.red.

[Principles of the automatization of loading and unloading operations] Puti avtomatizatsii pogruzochno-razgruzochnykh rabot. Moskva, Vses.izdatel'sko-poligr.ob"edinenie M-va putei soobshcheniia, 1960. 113 p. (MIRA 13:9)
(Loading and unloading) (Automatic control)
(Railroads--Freight)

YEFIMOV, G.P.; KOGAN, L.A.; PREDE, V.Yu., red.; MEDVEDEVA, M.A., tekhn.red.

[New types of automatic loaders, small containers and pallets] Novye tipy avtopogruzchikov malotonnazhnykh konteinerov i poddonov. Moskva, Gos.transp.zhel-dor.izhd-vo, 1960. 175 p. (Moscow. Vsesoiuznyi nauchno-issledovatel'skii institut zheleznodorozhnogo transporta. Trudy, no.183). (MIRA 13:11)
(Railroads—Freight) (Loading and unloading)

RIDEL', Eduard Ivanovich; SHTEFKO, Igor' Vladimirovich; YEFIMOV, G.P., retsenzent; TSARENKO, A.P., red.; MEDVEDEVA, M.A., tekhn. red.

[Transportation of palletized loads] Opyt perevozok gruzov v iashchichnykh poddonakh. Moskva, Vses. izdatel'sko-poligr. ob"edinenie M-va putei soobshcheniia, 1961. 47 p. (MIRA 14:7)
(Unitized cargo system)

GOLOVKIN, Mikhail Pavlovich; NAUMOV, A.F., retsenzent; NAUMKIN, A.N., inzh., retsenzent; RAMODIN, V.N., inzh., retsenzent; SOLDATENKOV, A.G., retsenzent; YEFIMOV, G.P., kand.tekhn.nauk, red.; MEDVEDEVA, M.A., tekhn. red.

[Design and operation of motor operated loaders] Ustroistvo i ekpluatatsiia avtopogruzchikov. Moskva, Vses.izdatel'sko-poligr. ob"edinenie M-va putei soobshcheniia, 1961. 77 p. (MIRA 14:12)

1. Abkhasian A.S.S.R. Statisticheskoye upravleniye.
(Abkhazia--Statistics)

KOROTKOV, Valentin Nikolayevich; YEFIMOV, G.P., kand. tekhn. nauk, retsenzent; TSARENKO, A.P., inzh., red.; KHITROVA, N.A., tekhn. red.

[Manual for the operator of a gantry crane] Posobie kranovshchiku kozlovogo krana. Izd.2., ispr. i dop. Moskva, Vses. poligr. ob"edinenie M-va putei soobshcheniia, 1961. 271 p. (MIRA 14:11)
(Cranes, derricks, etc.)

GONCHAROV, Nikolay Grigor'yevich; YEFIMOV, German Pavlovich; MANYUKOV, G.S., inzh., red.; KHITROV, P.A., tekhn. red.

[Transportation of nonstandard size and heavy-weight reight] Perevozki negabaritnykh i tiazhelovesnykh gruzov. Izd.2., perer. i dop. Moskva, Vses. izdatel'sko-poligr. ob"edinenie M-va putei soobshcheniia, 1961. 259 p. (MIRA 15:1)
(Railroads—Freight)

KOGAN, L.A.; YEFIMOV, G.P.; DERIBAS, A.T.; PETROVA, T.I.;
KATOLICHENKO, V.A., inzh., retsenzent; ORLOVA, I.A., inzh.,red.;
BOBROVA, Ye.N., tekhn.red.

[Demountable truck trailers and high-capacity containers]
Kontreilery i krupnotonnazhnye konteinery. Moskva
Izd-vo. -poligr. ob"ednienie m-va putei soobshchniia.
1962. 185 p. (Moscow. Vsesoiuznyi nauchno-issledovatel'skii
institut zheleznodorozhnogo transporta. Trudy, no.238).(MIRA 15:11)
(Piggyback transportation)

SHTEFKO, I.V.; RIDEL', E.I.; YEFIMOV, G.P., kand. tekhn. nauk, retsenzent; SHISHKIN, G.S., inzh., red.; MEDVEDEVA, M.A., tekhn. red.

[Over-all mechanization of the loading and unloading of fruit and vegetables] Kompleksnaia mekhanizatsii pogruzki-vygruzki plodoovoshchei. Moskva, Transzheldorizdat, 1963. 58 p. (MIRA 16:7)
(Loading and unloading) (Fruit--Transportation)
(Vegetables--Transportation)

STOGOV, V.N., doktor tekhn.nauk prof.; PLYUKHIN, D.S., kand. tekhn. nauk; [redacted], kand. tekhn.nauk; GRINEVICH, G.P., doktor tekhn. nauk, retsenzent; SHISHKIN, G.S., inzh., red.; USENKO, L.A., tekhn. red.

[Loading and unloading machinery] Pogruzochno-razgruzochnye mashiny. Moskva, Transzheldorizdat, 1963. 239 p. (MIRA 16:8)

(Loading and unloading--Equipment and supplies)

YEFIMOV, G.S.; PARSHUTIN, S.M.

Transpiration of cotton and alfalfa in Murgab and Tedzhen Oases.
Izv. AN Turk. SSR. Ser. biol. nauk no.2:24-29 '64.
(MIRA 17:6)

1. Turkmenskiy nauchno-issledovatel'skiy institut vodnykh problem i gidrotekhniki.

BARBASHOV, B.M.; YEFIMOV, G.V.

Green's function in the model of scalar charged mesons with a fixed source. Zhur. eksp. i teor. fiz. 38 no.1:198-200 Jan '60.
(MIRA 14:9)

1. Ob"edinennyy institut yadernykh issledovaniy.
(Nuclear models) (Potential, Theory of) (Mesons)

83195

S/056/60/039/002/032/044
B006/B070

24.4500

AUTHORS: Barbashov, B. M., Yefimov, G. V.

TITLE: A Method for Field-theoretical Problems Involving a Stationary Nucleon /9

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1960, Vol. 39, No. 2(8), pp. 450 - 460

4

TEXT: In the present paper the authors consider the example of an interaction between charged scalar mesons and stationary source and develop a new method for the solution of mesodynamical equations of this class of models. The applied formalism is not related to the coupling constant. It is based on the matrix method of solution of differential equations given by I. A. Lappo-Danilevskiy. The new formalism is equivalent to the perturbation theory, if the Hamiltonian of the system of neutral mesons and a stationary nucleon is taken to be the unperturbed Hamiltonian. While in the perturbation theory the approximation can be made only by taking an arbitrary number of terms of the series, the new method gives in a closed form the value of the n-th term of the

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A Method for Field-theoretical Problems Involving a Stationary Nucleon

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B006/B070

approximation. This fact also allows, in principle, the test of the convergence of the series. Thus, the field-theoretical problem is solved in the form of a series whose n-th term is known. Since the coupling constant does not act as the parameter for the expansion of the series, no assumption need be made about its smallness. The advantages of these facts are discussed. An investigation of the renormalized coupling constant leads to the conclusion that, in the exact solutions for some models, there exist poles at the point g=0. This fact makes all the methods doubtful when they are based on an expansion in terms of g. The renormalization constant is calculated according to the proposed method. It is found that the renormalized charge g_r has no logarithmic singularity in this model when a transition is made to the point interaction. Finally, it is shown that the method of functional integration, still only imperfectly worked out, leads to correct results in the given case. The authors hope that after further development, the method would lead still more efficiently to exact solutions of the field-theoretical problems. The authors thank Professor D. I. Blokhintsev and Academician N. N. Bogolyubov for stimulating discussions. Tamm, Dankov, and

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4

A Method for Field-theoretical Problems Involving a Stationary Nucleon

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B006/B070

D. V. Shirkov are mentioned. There are 9 references: 4 Soviet, 4 US, and 1 British.

4

ASSOCIATION: Ob"yedinennyy institut yadernykh issledovaniy (Joint Institute of Nuclear Research)

SUBMITTED: March 18, 1960

Card 3/3

BARBASHOV, B.M.; YEFIMOV, G.V.

Properties of the solution of the equation for one model of the local field theory. Dubna, Izdatel'skii otdel Ob"edinennogo in-ta iadernykh issledovanii, 1961. 10 p.
(No subject heading)

YEFIMOV, G.V.

[Renormalization of models in the theory of a field with a fixed nucleon] O perenormirovke modelei teorii polia s fiksirovannym nuklonom. Dubna, Ob"edinennyi institut iadernykh issl., 1961. 12 p. (MIRA 15:1)
(Nucleons) (Quantum field theory)

BARBASHOV, B.M.; YEFIMOV, G.V.

[Properties of the solution to Low's equation for a model in the local field theory] Svoistva resheniia uravneniia Lou dlia odnoi modeli lokal'noi teorii polia. Dubna, Ob"edinennyy in-t iadernykh issl., 1961. 14 p. (MIRA 14:11)
(Nuclear models) (Field theory)

S/056/61/040/003/017/031
B102/B205

24,4500

AUTHORS: Barbashov, B. M., Yefimov, G. V.

TITLE: Model of local field theory with finite charge renormalization

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 40, no. 3, 1961, 848-859

TEXT: A method previously developed by the present authors (cf. ZhETF, 38, 198, 1960 and 39, 450, 1960) has now been used to treat the modified Lee model of local field theory (T. D. Lee, Phys. Rev. 95, 1329, 1954) proposed by I. Bialnicki-Birula (Nucl. Phys. 12, 309, 1959), in which the condition of cross symmetry is satisfied. For this model in which the fixed nucleon appears in two states of different masses, the S-matrix and the renormalization constants are determined first. The solutions are obtained in the form of expansions in series of the renormalization constants Δm (Δm is a physical parameter corresponding to the difference in mass between the two fermion states in the model); these series converge in the ultraviolet ($E \gg \Delta m$). The principal feature of the model is its

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S/056/61/040/003/017/031
B102/B205

Model of local field theory...

finite charge renormalization in all orders with respect to Δm for point interaction (unlike the Lee model where the problem of zero charge arises). On the strength of the Hamiltonian

$$H = m_0(\psi^+\psi) + \frac{1}{2}\int dx :[\pi^2(x) + (\nabla\varphi(x))^2 + \mu^2\varphi^2(x)]: + \\ + g(\psi^+\tau_1\psi)\int dx\,\varphi(x)\,\delta(x) + \Delta m_0(\psi^+\tau_3\psi), \qquad (1)$$

the adiabatic S-matrix, S^α, was found to be

$$S^\alpha(t, t_0) = 1 - [2(\psi^+\psi) - (\psi^+\psi)^2] + \sum_{q=0}^{\infty} \frac{[-i(\psi^+\tau_3\psi)\,\Delta m_0]^q}{q!}\int_{t_0}^{t} d\xi_1 \ldots \int_{t_0}^{t} d\xi_q \times \\ \times :\exp\left\{-i(\psi^+\tau_1\psi)\,g\int_{t_0}^{t} ds \prod_{j=1}^{q} e(\xi_j - s)\,\hat{\varphi}(s)\,e^{-\alpha|s|}\right\}: \times \\ \times \exp\left\{-\frac{ig^2}{2}\int_{t_0}^{t}\int_{t_0}^{t} ds_1\,ds_2 e^{-\alpha(|s_1|+|s_2|)} \prod_{j=1}^{q} e(\xi_j - s_1)\,\Delta(s_1 - s_2)\,e(\xi_j - s_2)\right\} \times \\ \times \exp\left\{-\alpha\sum_{j=1}^{q}|\xi_j|\right\}. \qquad (3)$$

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Model of local field theory...

This expression is exact up to a phase constant. The matrix elements of the S-matrix were investigated, and

$$E_N = \lim_{a\to 0} \frac{\langle N | HS^2(0,-\infty) | N\rangle}{\langle N | S^2(0,-\infty) | N\rangle} =$$

$$= m + \delta_N \Delta m \sum_{q=0}^{\infty} (-\delta_N \Delta m)^q \int_0^{\infty} dx_1 \ldots \int_0^{\infty} dx_q x_1 \ldots x_q \times$$

$$\times \frac{\partial^q}{\partial x_1 \ldots \partial x_q} \exp\left\{2g^2 \sum_k \frac{1}{\omega^3} \sum_{l=1}^{q} \sum_{m=1}^{l} (-1)^{l+m} \exp\left(-\omega \sum_{j=m}^{l} x_j\right)\right\}, \qquad (6)$$

$$\delta_N = \begin{cases} +1 \text{ для протона } (N=p) \text{ (proton)} \\ -1 \text{ для нейтрона } (N=n). \text{ (neutron)} \end{cases}$$

Далее

$$m = m_0 - \frac{1}{2} g^2 \sum_k \omega^{-3}, \qquad (6')$$

$$\Delta m = \Delta m_0 \exp\left\{-g^2 \sum_k \omega^{-3}\right\}. \qquad (6'')$$

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Model of local field theory...

was obtained for the eigenvalue of the energy of the single-fermion state. The renormalization constant of the fermion field is determined by the square of the matrix element:

$$Z_2^N = |\langle N|N\rangle|^2 = |\langle N|S^a(0,-\infty)|N\rangle|^2 =$$
$$= Z_2^{ex}\left[\sum_{q=0}^{\infty}(\delta_N\Delta m)^q\int_0^\infty dx_1\ldots\int_0^\infty dx_q x_1\ldots x_q\times\right.$$
$$\times\frac{\partial^q}{\partial x_1\ldots\partial x_q}\exp\left\{g^2\sum_k\frac{1}{\omega^3}\left[-\sum_{l=1}^{q}(-1)^l\exp\left(-\omega\sum_{j=1}^{l}x_j\right)+\right.\right.$$
$$\left.\left.\left.+2\sum_{l=2}^{q}\sum_{m=1}^{l}(-1)^{l+m}\exp\left(-\omega\sum_{j=m}^{l}x_j\right)\right]\right\}\right]^2. \qquad (7)$$

Здесь

$$Z_2^{ex} = \exp\left\{-\frac{1}{2}g^2\sum_k\omega^{-3}\right\}$$

where Z_2 holds for scalar mesons, and $|\vec{N}\rangle$ denotes the single-nucleon state of the total Hamiltonian. As usual, the coupling renormalization constant is given by

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Model of local field theory...

$$\frac{g_r}{g} = \langle p | \psi^+ \tau_1 \psi | n \rangle = \lim_{\alpha \to 0} \frac{\langle p | S^\alpha(\infty, 0)\, \psi^+ \tau_1 \psi S^\alpha(0, -\infty) | n \rangle}{[\langle p | S^\alpha(\infty, -\infty) | p \rangle \langle n | S^\alpha(\infty, -\infty) | n \rangle]^{1/2}} =$$

$$= 1 + \sum_{q=1}^{\infty} (\Delta m)^{2q} \int_0^\infty dx_1 \ldots \int_0^\infty dx_{2q-1} x_1 \ldots x_{2q-1} \sum_{l=1}^{q} x_{2l-1} \times$$

$$\times \frac{\partial^{2q-1}}{\partial x_1 \ldots \partial x_{2q-1}} \exp\left\{2g^2 \sum_k \frac{1}{\omega^3} \sum_{l=1}^{2q-1} \sum_{m=1}^{l} (-1)^{l+m} \exp\left(-\omega \sum_{j=m}^{l} x_j\right)\right\}. \quad (8)$$

The renormalization constant of the vertex part is obtained in the form $Z_1 = Z_2^{CK} \sigma(g^2, \Delta m)$, where $\sigma(g^2, \Delta m)$ is a series of Δm, the terms of which are all finite for $g^2/\pi^2 < 1$. The matrix element of elastic scattering of a meson from a nucleon is written as

$$S_{l \leftarrow l} = \lim_{\alpha \to 0} \frac{\langle N | a_{p_l} S^\alpha(\infty, -\infty)\, a^+_{p_l} | N \rangle}{\langle N | S^\alpha(\infty, -\infty) | N \rangle} = \delta(p_l - p_l) - 2\pi i \delta(\omega_l - \omega_l)\, M_{l \leftarrow l}(\omega_l); \quad (10)$$

$$M_{l \leftarrow l}(\omega_l) = -\frac{2\delta_N g^2}{\omega_l^2} \frac{\Delta m}{\omega_l} \sum_{q=0}^{\infty} (-i\delta_N \Delta m)^q \int_0^\infty dx_1 \ldots \int_0^\infty dx_q \times$$

$$\times \left[q + 1 - \sum_{l=1}^{q} \sum_{m=1}^{l} (-1)^{l+m} \left\{\exp\left(i\omega_l \sum_{j=m}^{l} x_j\right) + \exp\left(-i\omega_l \sum_{j=m}^{l} x_j\right)\right\}\right] \times$$

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Model of local field theory...

$$\times(-1)^q\int_{x_1}^{\infty} dy_1 \ldots \int_{x_q}^{\infty} dy_q \frac{\partial^q}{\partial y_1 \ldots \partial y_q} \times$$

$$\times \exp\left\{2g^2 \sum_k \frac{1}{\omega^2} \sum_{l=1}^{q} \sum_{m=1}^{l} (-1)^{l+m} \exp\left(-i\omega \sum_{j=m}^{l} y_j\right)\right\}.$$

Next, it is proved that the series are convergent for E_p, Z_2^n, and g_r.

Professor D. I. Blokhintsev is thanked for his interest in the work and for a discussion, and also L. G. Zastavenko for a discussion of mathematical problems. Several mathematical problems are dealt with in appendages. There are 11 references: 4 Soviet-bloc and 7 non-Soviet-bloc. The three references to English language publications read as follows: R. Arnowitt, S. Deser, Phys. Rev. 100, 349, 1955; L. N. Cooper, Phys. Rev. 100, 362, 1955; S. F. Edwards, R. E. Peierls, Proc. Roy. Soc. A224, 24, 1954.

ASSOCIATION: Ob"yedinennyy institut yadernykh issledovaniy (Joint Institute of Nuclear Research)

SUBMITTED: September 30, 1960

Card 6/6

BARBASHOV, V.M.; YEFIMOV, G.V.; SARANTSEVA, V.R., tekhn. red.

[Remark on unrenormalized theories] Zamechanie o neperenormiruemykh teoriiakh. Dubna, Ob"edinennyi in-t iadernykh issl., 1962. 5 p. (MIRA 15:6)

(Quantum field theory)

YEFIMOV, G.V.

On the Kemmer scalar symmetrical model. Dubna, Ob"edinennyi in-t iadernykh issledovanii, 1962. 13 p.
(No subject heading)

S/056/62/042/002/033/055
B108/B104

AUTHORS: Barbashov, B. M., Yefimov, G. V.

TITLE: Properties of a solution of the Low equation for a local field theory model

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 42, no. 2, 1962, 520 - 525

TEXT: The Low equation is solved for a simple model of elastic scattering of a meson from a stationary nucleon. The latter may exist in two states whose difference Δ in mass is less than the mass of the meson. The amplitude of S scattering of a meson with energy $\omega = \sqrt{k^2 + \mu^2}$ is

$$M_N(\omega) = \frac{2\delta_N g_r^2}{(2\pi)^2} \frac{\Delta}{\omega(\omega^2 - \Delta^2)} \left\{ 1 - \frac{g_r^2 \delta_N \Delta}{4\pi \sqrt{\mu^2 - \Delta^2}} \frac{\sqrt{\mu^2 - \Delta^2} - \sqrt{\mu^2 - \omega^2}}{\sqrt{\mu^2 - \Delta^2} + \sqrt{\mu^2 - \omega^2}} \right\}^{-1}.$$

This solution has poles at the points $\pm\Delta$. The additional pole in the interval $[-\mu, \mu]$ which would contradict to the assumed analytical properties of $M_N(\omega)$ can be eliminated by imposing restrictions on the coupling constant g_r which are due to the single-particle unitarity relation:

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Properties of a solution...

$$\sqrt{\mu^2-\omega^2}=-\sqrt{\mu^2-\Delta^2}\left[1-\delta_N\frac{g_r^2\Delta}{4\pi\sqrt{\mu^2-\Delta^2}}\right]\Big/\left[1+\delta_N\frac{g_r^2\Delta}{4\pi\sqrt{\mu^2-\Delta^2}}\right].$$

$$g^2/4\pi<\sqrt{\mu^2-\Delta^2}/\Delta,$$

In an earlier paper (ZhETF, 40, 848, 1961) the authors have obtained the scattering amplitude in the form of a power series which they derived on the basis of the Hamiltonian formalism from the Schrödinger equation. Comparison between the two solutions showed that at energies $\omega<2\mu$ the contribution of many-particle states to the scattering amplitude is not greater than 15%. The restriction relating g_r and Δ with each other is valid in first-order approximation also for the power series solution. Professor D. I. Blokhintsev is thanked for discussions. Mention is made of L. A. Khalfin (ZhETF, 41, 1233, 1961) and V. N. Gribov, Ya. B. Zel'dovich, A. M. Perelomov (ZhETF, 40, 1190, 1961). There are 9 references: 4 Soviet and 5 non-Soviet. The four most recent references to English-language publications read as follows: R. Norton, A. Klein.

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Properties of a solution...

S/056/62/042/002/033/055
B108/B104

Phys. Rev., 109, 991, 1958; F. J. Dyson. Phys. Rev., 106, 157, 1957; F. Zachariasen. Phys. Rev., 121, 1851, 1961; G. F. Chew, F. E. Low. Phys. Rev., 101, 1570, 1956.

ASSOCIATION: Ob"yedinennyy institut yadernykh issledovaniy (Joint Institute of Nuclear Research)

SUBMITTED: August 12, 1961

Card 3/3

38863
S/056/62/042/006/022/047
B104/B102

24.7400

AUTHOR: Yefimov, G. V.

TITLE: The scalar symmetric model of Kemmer

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 42, no. 6, 1962, 1550-1566

TEXT: The scalar symmetric model of Kemmer (Proc. Cambl. Phil., 34, 354, 1938) is investigated by the method of Lappo-Danilevskiy (B. M. Barbashov, G. V. Yefimov, ZhETF, 39, 450, 1960) assisted by renormalization as developed for a field theory with a fixed nucleon. The object of the work is to gain a better understanding of the theory in the limiting case of point interaction. Results: The renormalized coupling constant is limited by $g_r^2/2\pi < 1$. In the case of point interaction the relation between g_r and g is finite. The logarithmic divergences in the perturbation theory are related to the expansion in terms of the coupling constant. $g_r = g_r(g)$ possesses no singular point at $g = 0$ but $\lim_{g\to\infty} g_r/g \neq 1$. This is valid if

Card 1/2

The scalar symmetric model ...

the series converge. The convergence problems were not investigated.

ASSOCIATION: Ob"yedinennyy institut yadernykh issledovaniy (Joint Institute of Nuclear Research)

SUBMITTED: December 20, 1961

Card 2/2

S/056/62/043/003/048/063
B108/B102

AUTHORS: Barbashov, B. M., Yefimov, G. V.

TITLE: A note on nonrenormalized theories

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 43, no. 3(9), 1962, 1057 - 1059

TEXT: R. Arnowitt, S. Deser (Phys. Rev., 100, 349, 1955) and L. Cooper (Phys. Rev., 100, 362, 1955) have tried to eliminate the ultraviolet divergence in some nonrenormalized models of field theory by analytical continuation in terms of the coupling constant g^2. It was concluded that the nonrenormalized interaction is related to the expansion in respect of g^2 in perturbation theory. It is shown here that this conclusion is incorrect, since analytical continuation in terms of g^2 leads to a complex eigenvalue of the single-nucleon state energy and to a complex renormalized coupling constant. This would be inconsistent with the hermiticity of the Hamiltonian (cf. also ZhETF, 40, 848, 1961)

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S/056/62/043/003/048/063
B108/B102

A note on nonrenormalized theories

$$H_I(t) = g(\psi^+\tau_1\psi)\hat{\pi}(t) + \Delta m_0(\psi^+\tau_3\psi); \qquad (1),$$

$$\hat{\pi}(t) = \int dx\rho(x)\frac{\partial}{\partial t}\varphi(x, t) = \sum_k \frac{v(k)}{\sqrt{2\omega}}(-i\omega)(a_k e^{-i\omega t} - a_k^+ e^{i\omega t}), \qquad (2).$$

$$\rho(x) = \sum_k v(k)e^{ikx}, \quad v(k) = \exp\left\{-\frac{\omega-\mu}{2L}\right\}.$$

This Hamiltonian is nonrenormalized since analytical continuation in terms of g^2 leads to results that are finite but have no physical sense. There is 1 figure.

ASSOCIATION: Ob"yedinennyy institut yadernykh issledovaniy (Joint Institute of Nuclear Research)

SUBMITTED: April 11, 1962

Card 2/2

L 13838-63 EWT(1)/FCC(w)/BDS AFFTC/ASD/ESD-3 IJP(C)

ACCESSION NR: AP3003146 S/0056/63/044/006/2107/2117

60
55

AUTHOR: Yefimov, G. V.

TITLE: On the construction of a local quantum field theory without ultraviolet divergences

SOURCE: Zhurnal eksper. i teor. fiziki, v. 44, no. 6, 1963, 2107-2117

TOPIC TAGS: quantum field theory, ultraviolet divergence, perturbation theory, nonlinear interaction Lagrangian, scalar particle mass correction

ABSTRACT: It is suggested that the difficulties of local theories in scalar quantum field theory, connected with the presence of ultraviolet divergences in the perturbation approach, are a result of the fact that the interaction Lagrangians usually considered grow more rapidly with respect to the scalar fields than the free-field Lagrangian. It is found possible to introduce nonlinear local interaction Lagrangians obeying certain conditions which do not give rise to ultraviolet divergences in second-order perturbation theory, although it is recognized that no definite conclusions can be drawn on the possibility of constructing a finite local theory without investigating the higher approximations. The S-matrix is first considered by the method of functional

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ACCESSION NR: AP3003146

integration and the basic assumptions concerning the possible forms of the interaction Lagrangian are formulated. The necessary conditions for the absence of ultraviolet divergences in second-order perturbation theory are then investigated in detail. As an example, the correction to the mass of the scalar particle is computed. "The author expresses his deep gratitude to Prof. D. I. Blokhintsev and Academician N. N. Bogolyubov for their interest and valuable comments, and to L. G. Zastavenkov and I. T. Todorov for useful advice." Orig. art. has: 3 figures and 48 formulas.

ASSOCIATION: Ob"yedinenny*y institute yaderny*kh issledovaniy (Joint Institute of Nuclear Research)

SUBMITTED: 26Jan63 DATE ACQ: 23Jul63 ENCL: 00

SUB CODE: 00 NO REF SOV: 001 OTHER: 006

Card 2/2

VOLKOV, M.K.; YEFIMOV, G.V.

[Analytical properties of amplitudes in the second order of the nonlinear field theory] Analiticheskie svoistva amplitud vo vtorom poriadke nelineinoi teorii polia. Dubna, Ob"edinennyi in-t iadernykh issl., 1964. 9 p.

L 4585-66 EWT(1)

ACC NR: AP5020268 UR/0367/65/002/001/0180/0189

AUTHOR: Yefimov, G. V. 44,55

TITLE: Regularization of nonrenormalizable theories

SOURCE: Yadernaya fizika, v. 2, no. 1, 1965, 180-189

TOPIC TAGS: quantum field theory, analyticity, causality principle, strong nuclear interaction

ABSTRACT: A scalar quantized field with a nonrenormalizable interaction Lagrangian is considered. The theory is first formulated in Euclidean space, in which the causal function is regularized to remove all divergences in the theory. The type of essential singularity considered is one in which the amplitude decreases properly in the Euclidean region, and increases more rapidly than a polynomial in the physical region. It is shown with the scalar field as an example that it is possible to introduce a relativistic cut-off which makes it possible to avoid all divergences in perturbation theory. The analytic continuation to the physical region does not violate in this case the unitarity, locality, and causality conditions. From the point of view of this cutoff procedure there is no difference between renormalizable and nonrenormalizable interactions. At infinite energies, the amplitudes of the physical processes are found to have an essential singularity. Consequently, the usual dispersion relations will not be valid in this version of the theory. "I thank Academician N. N. Bogolyubov, Professor D. I. Blokhintsev, Professor M. A. Markov, I. T. Todorov and

Card 1/2

ACC NR: AP5020268 6

A. N. Tavkhelidze for useful remarks." Orig. art. has: 5 figures and 50 formulas.,

ASSOCIATION: Ob"yedinennyy institut yadernykh issledovaniy (Joint Institute of Nuclear Research)

SUBMITTED: 22Jan65 ENCL: 00 SUB CODE: GP

NR REF SOV: 008 OTHER: 004.

Card 2/2 DP

L 1-1 ... EWT(1) ... SSD/AFWL/ASD(p)-3
ACCESSION NR: AP500... S/0056/64/047/005/1800/1805

AUTHORS: Volkov, M. K.; Yefimov, G. V.

B

TITLE: Analytic properties of amplitudes in second order in nonlinear field theory

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 47, no. 5, 1964, 1800-1805

TOPIC TAGS: field theory, perturbation theory, nonlinear theory, unitarity, causality

ABSTRACT: Continuing earlier efforts by one of the authors (Yefimov, ZhETF v. 44, 2017, 1963) to construct a finite local theory of the scalar field by introducing an essentially nonlinear interaction Lagrangian satisfying definite requirements, the authors investigate the ... of the processes ... second order of perturbation ... [illegible]

Card 1/2

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001962330001-6"

L 16101-65
ACCESSION NR: AP5000335

2

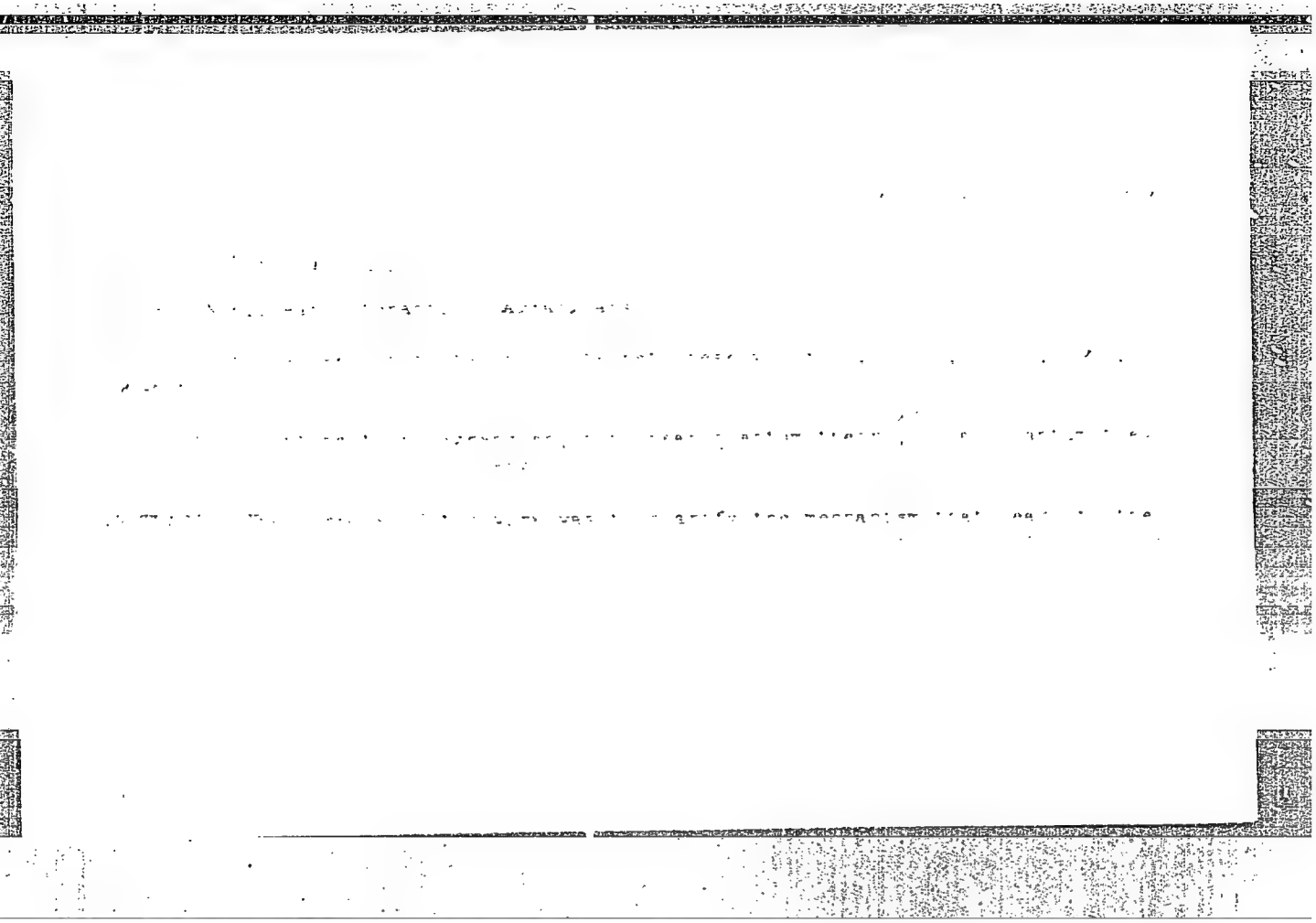
theory is proved in this order. An analysis of the asymptotic behavior of the imaginary parts of the amplitudes for large values of the momenta and for high energies indicates that only a study of the higher approximations of the perturbation theory can yield complete [illegible] the behavior of the amplitudes [illegible] nonlinear theory agrees with causality [illegible], at least [illegible] order of perturbation theory. "The authors thank L. G. Zastavenko for a discussion." Orig. art. has: 1 figure and 36 formulas.

ASSOCIATION: Ob"yedinenny*y institut yaderny*kh issledovaniy (Joint Institute of Nuclear Research)

SUBMITTED: 21Apr64 ENCL: 00

SUB CODE: NP, GP NR REF SOV: 003 OTHER: 002

Card 2/2



APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001962330001-6"

SUBMITTED: 31Jul64 ENCL: 00 SUB CODE: GP

NR REF SOV: 001 OTHER: 006

YEFIMOV, Gerontiy Valentinovich; ARKHAROVA, V.G., red.

[Countries and people] Strany i liudi. Leningrad, Lenizdat, 1965. 302 p. (MIRA 18:12)

YEFIMOV, Grigoriy Vasil'yevich; AKSENOV, G.A., redaktor; SARMATSKAYA, G.I., redaktor izdatel'stva; SHITS, V.P., rekhnicheskiy redaktor

[Drying and thoroughly soaking wood in petrolatum] Sushka i glubokaia propitka drevesiny v petrolatume. Moskva, Goslesbumizdat, 1956. 27 p. (MLRA 9:7)
(Wood--Preservation) (Petrolatum)

YEFIMOV, I., predsedatel'

More coal for our country. V pom. profaktivu 14 no.14:10-12 Jl '53. (MLRA 6:7)

1. Komitet profsoyuza shakhty no.29 imeni Stalina. (Coal mines and mining)

YEFIMOV, I.

Pavel Afonin, distinguished excavator operator. Stroitel' no.5:12 My '58. (MIRA 11:6)

(Afonin, Pavel)

YEFIMOV, I., inzh. po tekhnike bezopasnosti

Machines should be delivered with safety guards. Bezop. truda v prom. 2 no.12:36 D '58. (MIRA 11:12)

1. Verkhne-Kamskoy fosforitnyy rudnik.
(Woodworking machinery--Safety measures)